

Science

Science

Physical Science

Forces and Sounds

Genre	Comprehension Skill	Text Feature	Science Content
Nonfiction	Cause and Effect	• Glossary	Forces and Sound

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by Carol Levine

Vocabulary

attract
force
gravity
magnet
pole
repel
speed
vibrate

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Moving



Look at this ball. A boy throws it in the air. Does it go in the hoop?

Force is a push or a pull that can make something move. Force happens when the boy throws the ball.



What happens when the ball drops? It falls. **Gravity** is a force that pulls things down toward the ground. Gravity pulls the ball down.



Using Force



Throw the ball hard. How far will it go?
Throw the ball gently. Now how far will it go?
A hard push has more force. A gentle push
has less force. Force can change the way
things move.



Speed



Speed is how fast or slowly something
moves. Use more force. Things move faster.
Use less force. Things move more slowly.

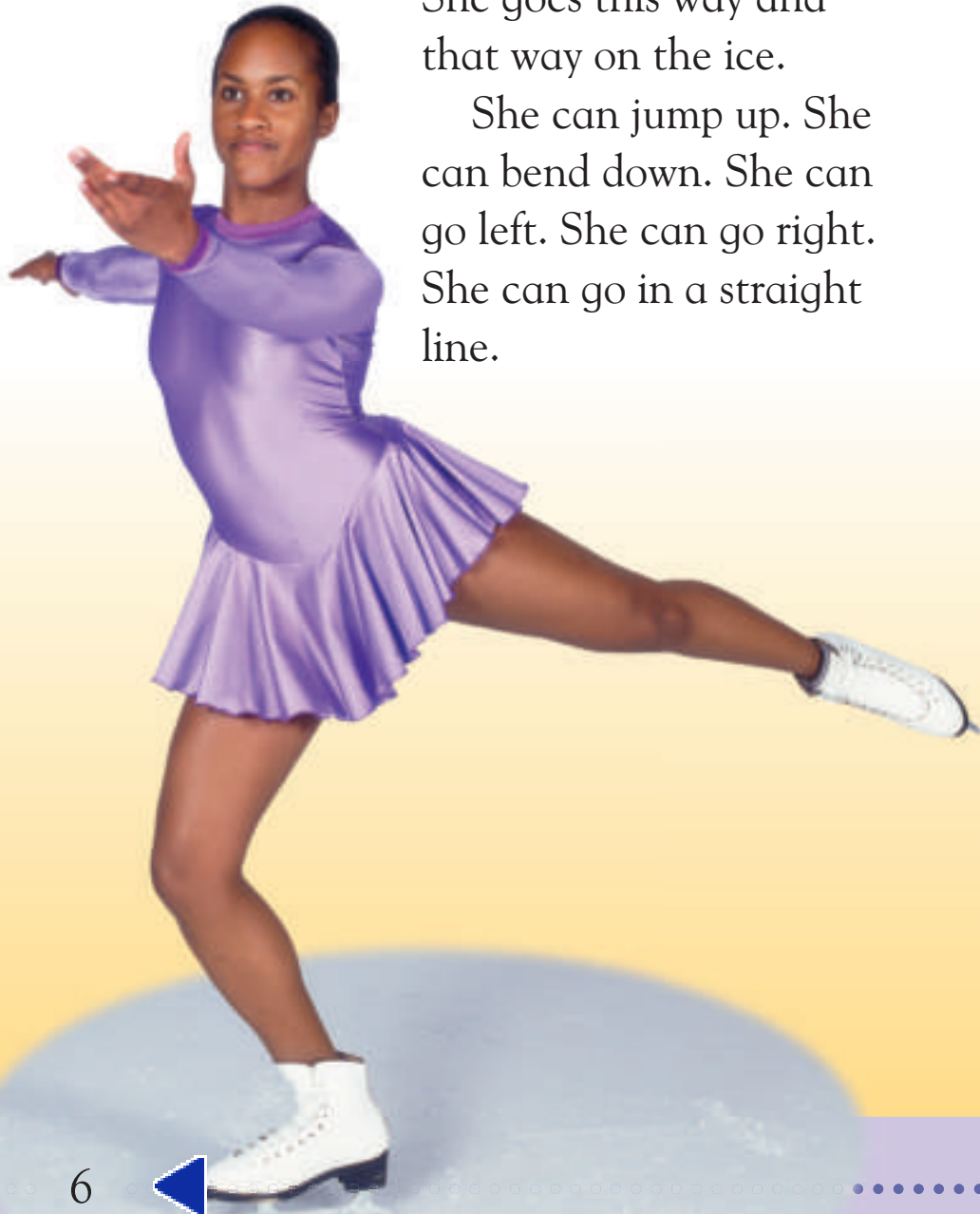




Ways to Move

Look at a skater move.
She goes this way and
that way on the ice.

She can jump up. She
can bend down. She can
go left. She can go right.
She can go in a straight
line.



She can move in a curve.
She can even zigzag. She might fall.
Gravity pulls her to the ground.





Different Places



Look at these blocks. Can you tell where each block is?

The yellow block is above the red one. The blue block is below the green one. The yellow block is between the blue one and the red one.



The yellow block is next to the red one. The yellow block is on the floor. What will change if the blocks fall out of the bucket?





Magnets



Look at the magnets staying up. A **magnet** attracts some kinds of metal. **Attract** means pull toward.

Magnets do not always attract. They can repel. **Repel** means to push away. Magnets may have two ends, or **poles**. Opposite poles attract. The same poles repel.



A magnet makes this game work. The magnet pulls pieces of metal.

Magnets pull with more force when they are close to metal. Magnets pull with less force when they are far from metal.





Making Sounds



Look at these instruments. How do they make sounds?

When a sound is made something vibrates. **Vibrate** means to move back and forth very fast. Force changes sound. A strong tap makes a different sound than a light tap.



Finding Sounds



Sounds are all around.

Suppose you are in a toy store. You might hear a toy bell ringing. You might hear a toy drum playing. You might hear a toy car beeping. You might hear a grown-up saying it is time to go.





Sounds are in nature. Suppose you are on this beach. You might hear birds chirping. You might hear the waves crashing. You might hear the wind blowing.




Things move. Sometimes this movement makes sound. Sometimes this movement puts things in different places. Movement and sound are all around!



Glossary

attract	to pull toward
force	a push or a pull that makes something move
gravity	a force that pulls things down toward the ground
magnet	an object that can attract things made of some kinds of metal
poles	ends of some magnets
repel	to push away
speed	how fast or slowly something moves
vibrate	to move back and forth very fast

What did you learn?

1. What force makes a ball fall toward the ground?
2. How can force change the speed of something?
3. **Writing in Science** Magnets can repel and attract. Write to explain how magnets can do both. Use words from the book as you write.
4.  **Cause and Effect** What would happen if you pressed a piano key very hard? What would happen if you pressed a piano key softly?

